

All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 17 December 2021

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- Gradual fall in minimum temperatures by 2-3°C over most parts of Northwest India and Maharashtra; by 3-5°C over most parts of Central India during next 4 days.
- Cold wave conditions very likely over Jammu, Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand, Punjab, Haryana & Chandigarh during next 4 days; over north Rajasthan during next 5 days; over Gujarat state during next 3 days and over West Uttar Pradesh during 19th-21st. Severe cold wave conditions also very likely over north Rajasthan during next 3 days and over Punjab and Haryana & Chandigarh on 19th & 20th December, 2021.
- Dense to Very dense fog in the morning hours in isolated pockets very likely over Punjab during 18th-20th; over Haryana & Chandigarh during 18th-19th; over north Rajasthan on 18th and Dense fog in isolated pockets over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 18th & 19th December, 2021.
- Ground frost conditions in the morning hours in isolated pockets very likely over Punjab, Haryana & Chandigarh and north Rajasthan during next 3 days.
- A cyclonic circulation lies over Equatorial Indian Ocean & adjoining central parts of South Bay of Bengal and extends upto midtropospheric levels. It is likely to move east-northeastwards. Under its influence, a Low Pressure Area is likely to form over Southeast Bay of Bengal & adjoining Equatorial Indian Ocean during next 24 hours. Under its influence:
 - (i) Squally weather (wind speed 40-50 kmph gusting to 60 kmph) very likely over central parts of South Bay of Bengal & adjoining Equatorial Indian Ocean on 17th and over Southeast Bay of Bengal & adjoining South Andaman Sea on 18th & 19th December, 2021. Fishermen are advised not to venture into these areas.
 - (ii) Light to moderate rainfall at a few/many places over Andaman & Nicobar Islands during 18th-20th December and Heavy rainfall over Nicobar Islands on 19th & 20th December, 2021.

- The images showing the latest satellite picture in the figure. 1.

Main Weather Observations (IMD)

- Rainfall/Snowfall observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over Jammu & Kashmir, Ladakh, Gilgit, Baltistan, Muzaffarabad.
- Cold Wave conditions observed (from 0830 hours IST of yesterday to 0830 hours IST of today): Cold Wave to Severe Cold Wave conditions in isolated pockets over Saurashtra & Kutch and Cold Wave conditions in isolated pockets over Punjab, Haryana and north Rajasthan.
- Fog observed (at 0830 hrs IST of today): Dense to very dense fog in a few pockets over Punjab and in isolated pockets over north Rajasthan; Dense fog in isolated pockets over Jammu & Kashmir, Ladakh, Gilgit, Baltistan, Muzaffarabad and Haryana & Chandigarh; Shallow to Moderate fog in isolated pockets over Delhi, East Uttar Pradesh and Jharkhand.
- Minimum Temperature Departures (as on 17-12-2021): Minimum temperatures are markedly above normal (5.1°C or more) at a few place over Madhya Maharashtra and Madhya Pradesh; above normal (1.6°C to 3.0°C) at many places over Marathwada and Kerala & Mahe; at a few places over East Rajasthan, Konkan & Goa, Karnataka, Tamil Nadu, Puducherry & Karaikal, East Uttar Pradesh, Lakshadweep and Andaman & Nicobar Islands; at isolated places over Rayalaseema. They are markedly below normal (5.1°C or less) at isolated places over Saurashtra & Kutch and Jammu & Kashmir, Ladakh, Gilgit, Baltistan, Muzaffarabad; appreciably below normal (- 3.1°C to -5.0°C) at a few places over Haryana, Chandigarh & Delhi and West Rajasthan and at isolated places over Odisha; below normal (-1.6°C to -3.0°C) at most place over Uttarakhand; at many places over Gujarat Region; at a few places over Gangetic West Bengal and at isolated places over Coastal Andhra Pradesh & Yanam and Telangana and near normal over rest parts of the country. Today, the Lowest minimum temperature of 0.0°C is reported at Churu (Wet Rajasthan) over the plains of the country.
- Maximum Temperature Departures (as on 16-12-2021): Maximum temperatures were above normal (1.6°C to 3.0°C) at many places over Assam & Meghalaya; at a few places over Kerala & Mahe and at isolated places over Madhya Pradesh and Tamil Nadu, Puducherry & Karaikal. They were markedly below normal (5.1°C or less) at isolated places over Haryana, Chandigarh & Delhi; appreciably below normal (-3.1°C to -5.0°C) at a few places over Himachal Pradesh and Rajasthan and at isolated places over Jammu & Kashmir, Ladakh, Gilgit, Baltistan,

Muzaffarabad, Gujarat Region, Konkan & Goa, Odisha and Gangetic West Bengal; below normal (-1.6°C to -3.0°C) at a few places over Punjab, West Uttar Pradesh, Saurashtra & Kutch and Madhya Maharashtra and at isolated places over East Uttar Pradesh, North Interior Karnataka, Telangana and Andaman & Nicobar Islands and near normal at rest parts of the country. Yesterday, the highest maximum temperature of 35.6°C was reported at Cannur (Kerala & Mahe).

Weather Warning during the next 5 days (IMD)

- 17 December (Day 1): Dense to Very Dense fog in a few pockets very likely over Punjab and in isolated pockets over Haryana & Chandigarh and Dense fog in isolated pockets over north Rajasthan, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Cold Wave to severe cold wave conditions in a few pockets very likely over north Rajasthan and Cold wave conditions in isolated pockets over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Chandigarh and Saurashtra & Kutch. Cold Day conditions in a few pockets very likely over Punjab and in isolated pockets over Haryana & Chandigarh and north Rajasthan. Ground frost conditions in the morning hours in isolated pockets very likely over north Rajasthan, Punjab and Haryana. Squally weather (wind speed 40-50 kmph gusting to 60 kmph) very likely over central parts of South Bay of Bengal & adjoining Equatorial Indian Ocean. Fishermen are advised not to venture into these areas.
- 18 December (Day 2): Dense to Very Dense fog in isolated pockets very likely over Punjab and Dense fog in isolated pockets over Haryana & Chandigarh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Cold Wave to severe cold wave conditions in a few pockets very likely over Punjab, Haryana & Chandigarh and north Rajasthan and Cold wave conditions in isolated pockets over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, West Uttar Pradesh and Gujarat state. Cold Day conditions in isolated pockets very likely over Punjab and Haryana & Chandigarh. Ground frost conditions in the morning hours in isolated pockets very likely over north Rajasthan, Punjab and Haryana. Squally weather (wind speed 40-50 kmph gusting to 60 kmph) very likely over Southeast Bay of Bengal & adjoining South Andaman Sea. Fishermen are advised not to venture into these areas.
- 19 December (Day 3): Dense fog in isolated pockets very likely over Punjab. Cold Wave to severe cold wave conditions in a few pockets very likely over Punjab, Haryana & Chandigarh and north Rajasthan and Cold wave conditions in isolated pockets over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad,

Himachal Pradesh, Uttarakhand, West Uttar Pradesh and Gujarat state. Ground frost conditions in the morning hours in isolated pockets very likely over north Rajasthan, Punjab and Haryana. Heavy rainfall in isolated pockets very likely over Nicobar Islands. Squally weather (wind speed 40-50 kmph gusting to 60 kmph) very likely over Southeast Bay of Bengal & adjoining South Andaman Sea. Fishermen are advised not to venture into these areas.

- 20 December (Day 4): Cold Wave in isolated pockets over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Chandigarh, north Rajasthan and West Uttar Pradesh. Heavy rainfall in isolated pockets very likely over Nicobar Islands.
- 21 December (Day 5): Cold Wave conditions in isolated pockets likely over north Rajasthan
- The weather outlook for seven days i.e., 17 Dec to 25 Dec 2021 forecasted (Provided by Real-Time Weather Forecasts from NOAA/NCEP collected from <http://monsoondata.org/wx2/>) rain/thundershower may occur over Some parts of Extreme northern parts of India. (Fig. 2).

Agricultural activities (AICRPAM-CRIDA)

Himachal Pradesh

Weather condition:

The maximum and minimum temperature ranged between 14.5 to 18.5 °C and 2.0 to 4.5 °C which was below normal by 0.3 to 2.0 °C and 2.1 to 4.2 °C, respectively. No rainfall was received during the week against the normal of 10.3 mm. The relative humidity varied between 38-90 % and sunshine hours between 5.5-9.0 hrs/day with variable sky conditions (Octa 0-4). The evaporation rate varied 2.0-2.6 mm per day.

Contingency measure:

- Rabi Crops: Wheat: In the early planted wheat crop where weeds are 2-3 leaves stage, spray isoproturon @ 70 g or Vesta @ 16 g per 30 litres of water in one kanal for the control of weeds.
- Storage of Grains: Grains should be properly dried to right moisture level before storing. Godowns should be properly cleaned by removing all the grains and other storage matter of previous crop.
- Mustard: Thinning and weeding is recommended in timely sown mustard crop. Keeping in view of relative humidity farmers are advised for monitoring of mustard crop against attack of white rust. If infection is high than spraying of Dithane - M -45 @ 2 gram/ litre of water of water is advised. Keeping in view of

weather, farmers are advised for monitoring of mustard crop against aphid attack.

- Fodder Crops: Intercultural operations on already sown berseem, lucerne and oats for fodder of Rabi season also advised. The lantana weeds in the grasslands may be cut so that regenerated growth during September can be sprayed with 1% glyphosate for its control.
- Vegetable Crops: Add mulch material in space between two rows of vegetables crops for conservation of soil moisture and maintaining the soil temperature.
- Onion & Garlic: Sowing of garlic and onion is advised. Farmers are advised to monitor their fields regularly. Spray of Imidacloprid 17.8 % SC@ 1.0 ml/3 lit of water is recommended against white flies and other sucking pests in all crop and vegetables when sky is clear.
- Radish & Turnip: Thinning of turnip, carrot and radish is advised. Maintain a plant to plant distance of 7 -10 cm.
- Cabbage & Cauliflower: Advised to complete transplanting of seedlings of cabbage, cauliflower, knoll khol and broccoli are advised. Mix well rotten FYM prior to transplanting. The downy mildew is expected in cruciferous vegetables, for control spray redomil M -Z @ 25 g per litres of water at 15 days interval.
- Potato: Farmers are advised to start earthing -up in potato if crop has attained a height of 15 -22 cm. If so required, the practice may be repeated after 15 days . Due to high relative humidity, infection of blight may occur in potato and tomato. Constant monitoring is advised. If symptoms appears than spray of Carbandizam @ 1.0 gm / litre of water or Dithane - M -45 @ 2.0 gm / litre of water is recommended.
- Poly House Agriculture: Advised tomato, cucumber and capsicum sowing and transplanting. For control of powdery mildew, aphids and spodoptera spray recommended chemicals. Keep yellow sticky trap in polyhouse and after transplanting drench plant with imidachlorpid. Leaf spot/blight is expected in shimla mirch and tomato for control spray tilt 1ml per liters of water.
- Tea: Training, skiffing and cleaning work can be completed in the tea orchards. Do lopping of the tree in the tea orchards to have more sunlight. The skiffed material may be used to prepare compost so that it could be applied in next season.
- Livestock: Ecto-parasite attack is expected in this weather for control spray Butox @ 2 ml per litre in cowshed Give mixture of hay & green fodder. The weather is suitable for the attack of pink eye disease in newly born calves, for control prepare the solution of 1% boric acid in boiled water and wash eyes at regular

interval of three hours. Give mixture of hay & green fodder. Advised not to allow animals to eat lantana these days. Dry bedding may be provided to save the animals from cold. Young calves must be kept in the sheds during nights.

- Poultry: Make sure to deworm your older flocks every month against roundworms. Ensure proper ventilation in poultry houses. Replace the poultry houses with fresh litter and keep the houses clean and ensure drinking water to the birds. For precautionary measures spray formaline 40% @ 1litre in 9 litres of water in outside or surrounding of farm. Provide vitamin A and vitamin B-complex with water. Ensure proper space for egg laying of birds and provide 14- to 16 hours light including day light. Normal feeding schedule should be continued and add mineral in the diet if stress is seen.
- Mushrooms: Dingri can be sown in closed room, maintain temperature of 25-28 degree Celsius and relative humidity of 80-85 % for good crop. Advised to fill compost bags with span for button mushrooms.
- Horticulture: Keep the basins of the plants free from weeds. The new growth appearing below bud union may be cut. If a termite outbreak appears on the trees, spray Chlorpyrifos 20 EC @ 3ml/l. Monitor foliar pest on plants of Citrus species. Spray Chlorantraniliprole 18.5SC @ 0.4 ml/l or lambda-cyhalothrin 4.90CS @0.8 ml/l for pomegranate butterfly. Advised recommended spray of chemicals for control of citrus canker. In peach gum is coming out from tree trunk, for control bordeaux paint may be applied in the affected area. Advised planting of strawberry. Wrapping of plastic sheets around mango trunk should be done for preventing climbing of young mealy bugs. Apply grease to seal any cracks in the polythene sheets. If the stem borer problem is there in spray insecticide or control them with applying kerosene oil. Keep the basins of the plants free from weeds. Prepare the pits for planting the winter plants like pecanun, walnut, almond plum and peach. In peach gum is coming out from tree trunk, for control bordeaux paint may be applied in the affected area.
- Fruit Trees: Sowing of mango, litchi, guava, papaya, pecanut and kagzi lime is recommended under these weather conditions. Air layering of litchi, guava, kagzi lime and lemon is recommended. Side veneer grafting in mango and inverted T-budding in citrus is recommended. Transplanting of seedlings of rough lemon (Khatti) in the nursery beds, if not done during July. Weeding in nursery is recommended.

SAT : INSAT-3D IMG
IMG_TIR1 10.8 um
LIC Mercator

17-12-2021/(0800 to 0826) GMT
17-12-2021/(1330 to 1356) IST

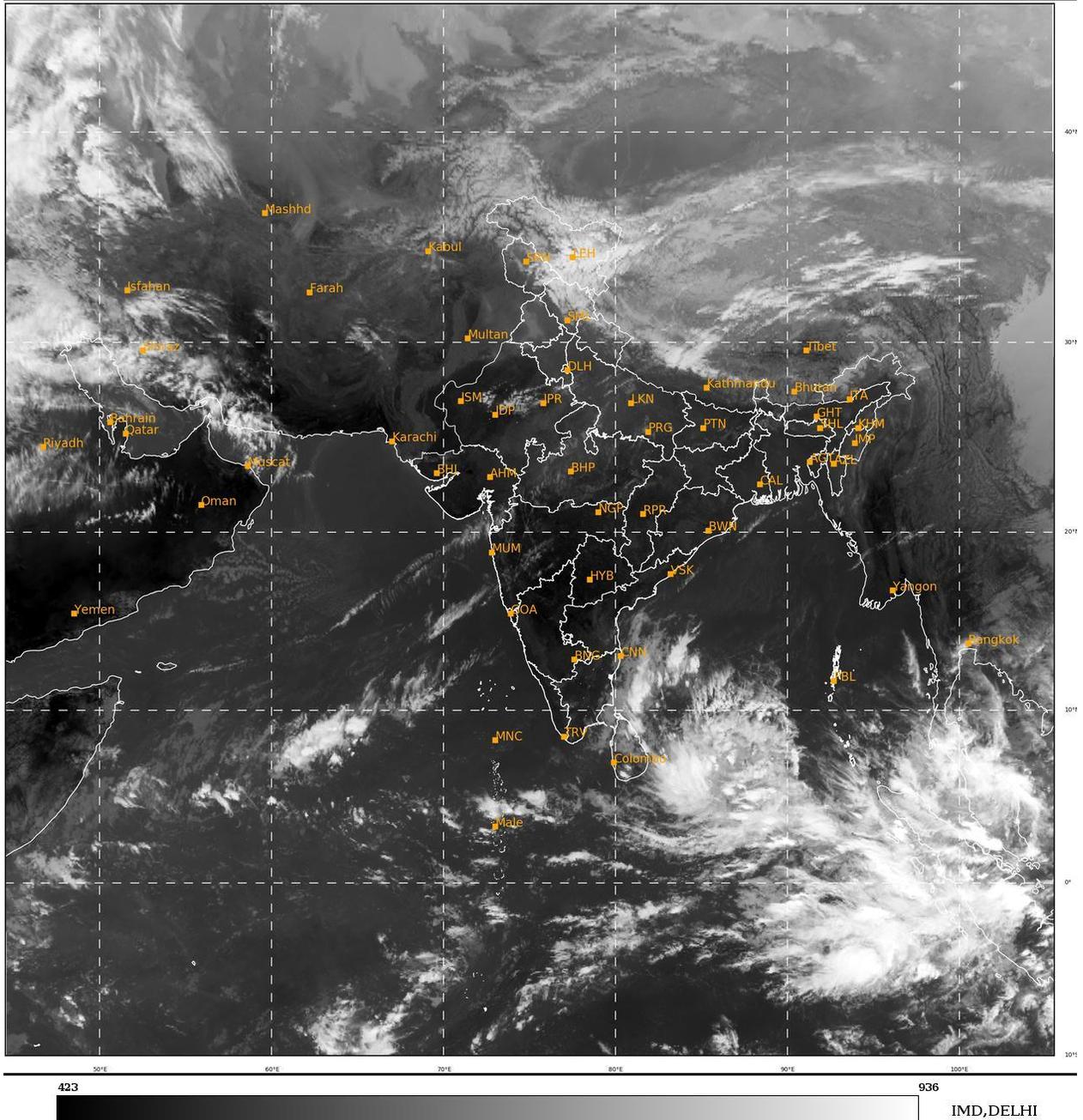


Figure: 1. Latest available satellite picture as on 17 Dec 2021 at 1356 Hrs (IST). (Source: IMD).

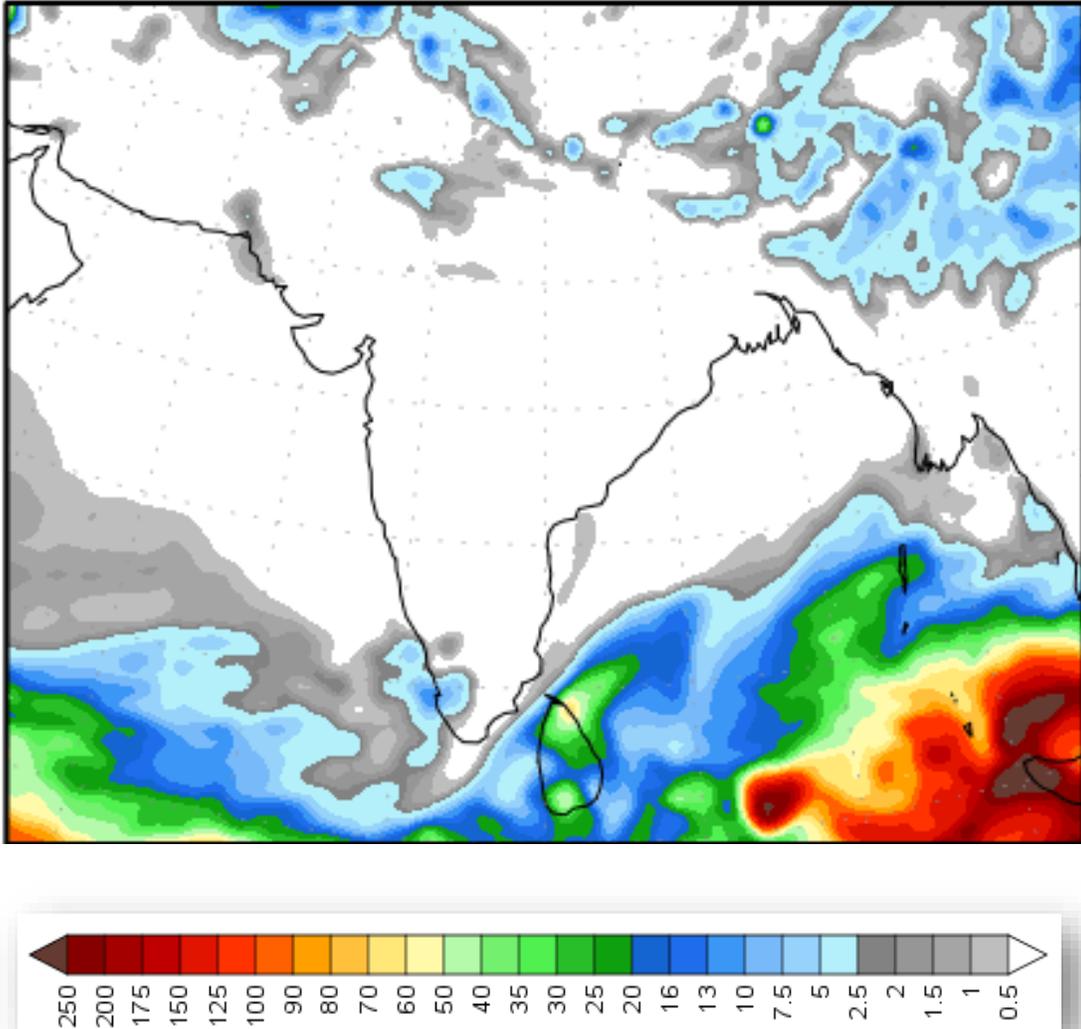


Figure:2. Precipitation forecast for 17 Dec to 25 Dec 2021 (Source: NOAA NCEP).

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